Amendments to the Specification:

Please amend the specification as follows:

Beginning with line 30 on page 12, and again on line 17 of page 13 please correct the following paragraph as indicated:

Referring to FIG. 3, in the receiver [50] 66 a bank of correlators followed by a largest correlation modulus selector is used to decode the "as received" signal. The CCK codeword is an eight chip signal vector having a generalized Hadamard structure that can be decoded with a fast transform. Since the CCK codewords are created by encoding φ_1 across all chips of the signal, φ_2 across all odd chips, φ_3 across all odd pairs of chips and φ_4 across all odd chip quads, each of the phase parameters can be factored from out of the codeword as follows:

$$c = e^{j(\varphi_1)}\{e^{j(\varphi_4)}\{e^{j(\varphi_3)}\{e^{j(\varphi_2)},1\},\{e^{j(\varphi_3)}\{e^{j(\varphi_2)},1\},\{e^{j(\varphi_2)},1\}\}\}$$

A butterfly fast transform correlation structure having two inputs and four outputs can be defined for each factorization where an input comprises a set of correlations from the preceding transform stage. Since φ_1 is encoded across all chips, a butterfly is not needed for its correlation. The basic butterfly structure for CCK chips is illustrated in FIG. 5. The operation of the butterfly 80 comprises an ordered addition and subtraction of the inputs 82 and 84 and multiplication of an input by an appropriate twiddle factor 86, 88, 90, or 92 to produce the four butterfly transform outputs 94, 96, 98, and 100. Since the phase parameters φ_2, φ_3, and φ_4 can be factored from the codeword, the correlation can occur in stages. As illustrated in FIG. 4, in IEEE 802.11 b correlator 110 the φ_2 correlations occur in the four, two chip butterfly processors 112. The [eight] four outputs of the pairs of two chip butterflies 112 are input to a pair of four chip butterfly processors 114.

Likewise, the two sets of 16 outputs of four chip butterflies 114 are input to an 8 chip butterfly processor 116 which produces 64 correlations. The largest modulus selector 118 selects the largest of the 64 correlations as the "as received" signal permitting six bits 120 of the information to be estimated. Another two bits of information 122 are estimated in a phase decoder 124 by differentially decoding of φ_1 from the results of the output of the 8 chip butterfly 116 and the six estimated information bits 120.

In the paragraph that begins on line 27 on page 13, and ends on line 19, page 14, please make the indicated corrections to line 12, page 14 and to line 16, page 14.

A method of bandwidth efficient multilevel modulation for a DSSS wireless system using M-PSK (M-ary phase shift keying) is disclosed in the co-pending U.S. Patent application referenced above. Attaining a 22 Mbits/s data rate with a symbol rate of 1.375 Mbits/s requires that each transmitted codeword encode 16 data bits (16-PSK modulation). Referring to FIG. 6, in the 16-PSK modulator 130 the serial information data bit stream 132 is partitioned into 16-bit words (bits d_0 - d_{15}) by a serial to parallel multiplexer 134. The words are further grouped into four bit nibbles 136, 138, 140 and 142 at the output of the multiplexer 134. The values of the bits in each nibble are mapped to the phase parameters φ_1, φ_2, φ_3, and φ_4. Three nibbles, bits (d_4, d_5, d_6, d_7) 136; (d_8, d_9, d_{10}, d_{11}) 138; (d_{12}, d_{13}, d_{14}, d_{15}) 140;

respectively, are mapped to the phase parameters φ_2, φ_3, and φ_4. In other words, the values of bits of three nibbles are used to select one of 256 subcodes 144.] Since the phase parameter φ_1 is common to all chips of the codeword, it is used to differentially modulate the entire codeword. The phase parameter φ_1 [146] 152 is encoded by initially mapping the values of the four data bits d_0, d_1, d_2, and d_3 142 to select one of two values of φ_1 which are rotated 180° to each other. One of the two possible values of φ_1 is selected as a function the sequence of the codeword in the bit stream as determined by an indexer 150. Alternately a differential phase encoder [152] 148 selects phase parameter φ_1 that is rotated 180° relative to that of the previous codeword to differentially modulate the signal. As a result, 16 information bits are used to select one of 4096 codewords 154 for transmission.

Beginning on line 3, page 18, please correct the punctuation of the sentence as indicated.

All the references cited herein are incorporated by reference.